



# Topics

- FY 2018 fleet dataset
- Data Quality
  - Where are the rough spots?
  - What can we do about them?
- Looking forward
  - Watching quality
  - New ways of viewing fleet data



# FY 2018 FEDERAL FLEET DATASET



# FY 2018 Data Call

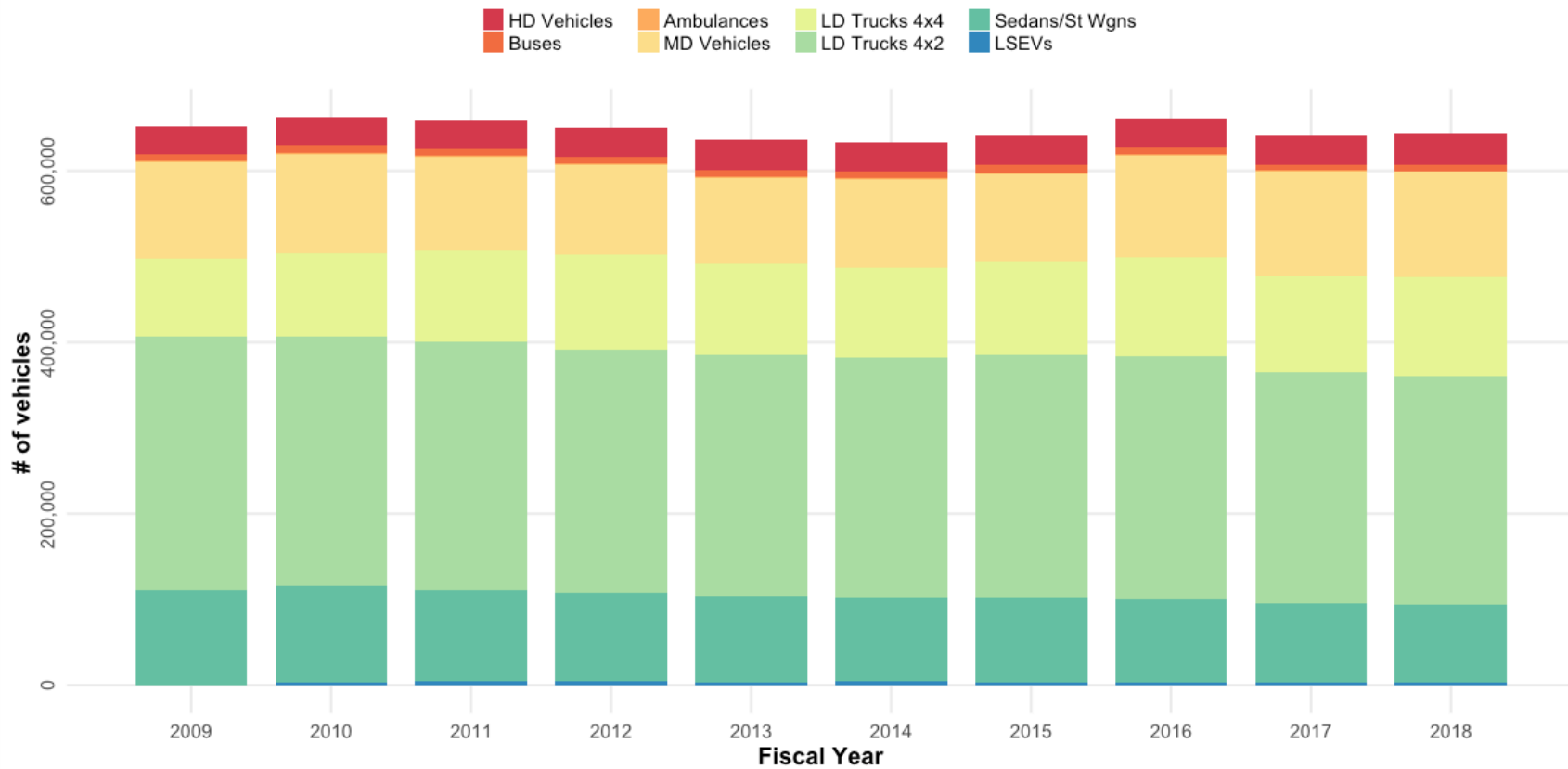
- Initial close 12/17/2018
- Final close 03/20/2019
- Milestones:
  - All reporting agencies provided VLD
  - New structured review process



# FY 2018 Fleet Data Overview

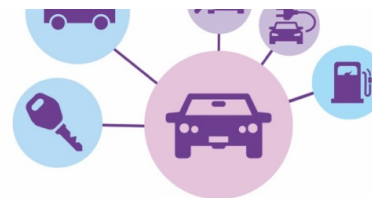
## Federal Vehicle Inventory

Inventory by Fiscal Year and Vehicle Class



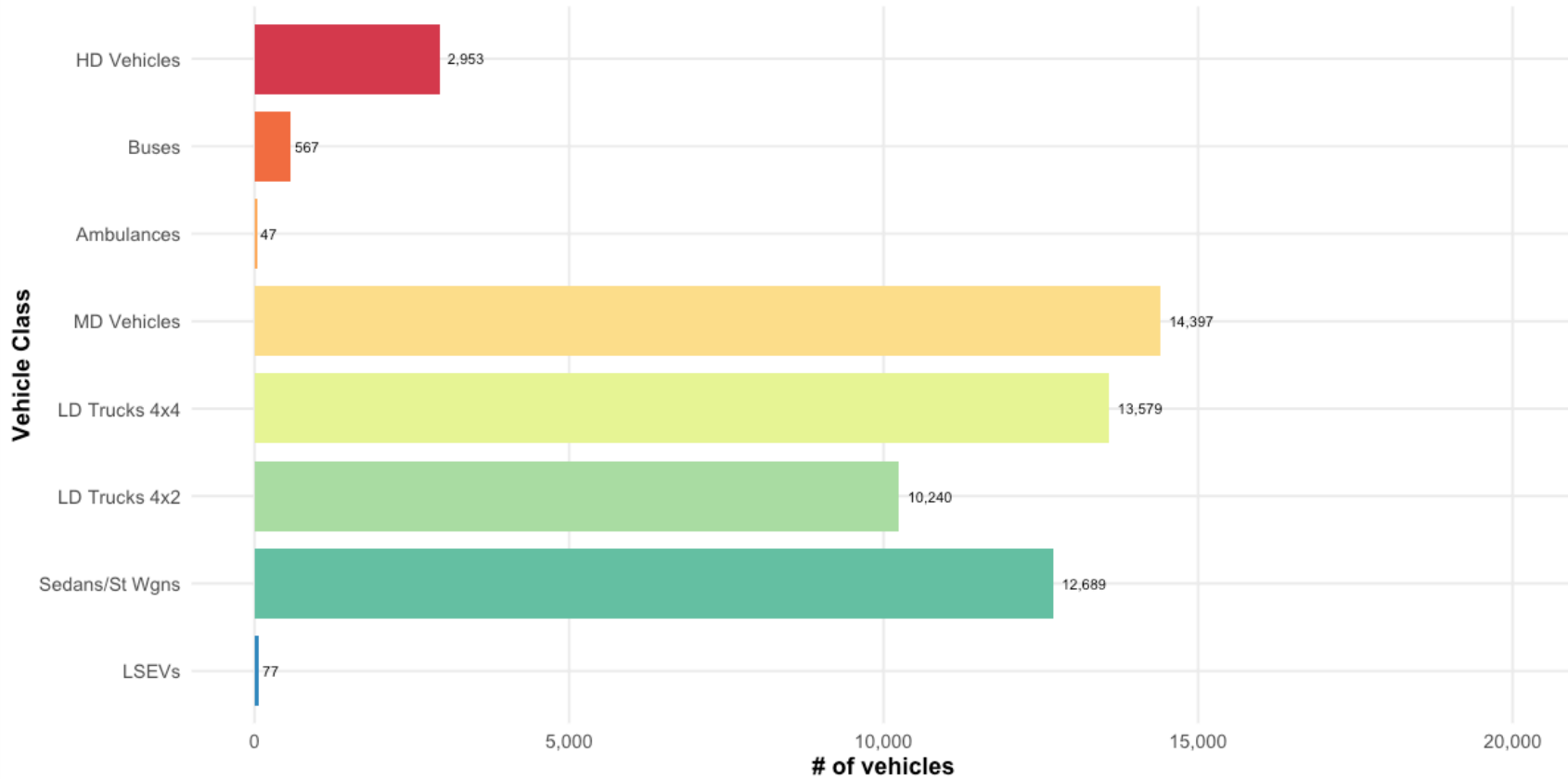
Source: FAST, final data as of 2019-03-21

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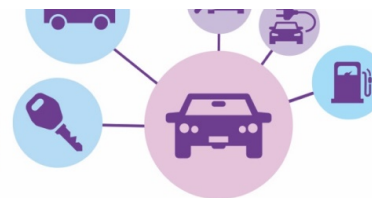
# FY 2018 Fleet Data Overview

**Federal Vehicle Acquisitions**  
FY 2018 Acquisitions by Vehicle Class



Source: FAST, final data as of 2019-03-21

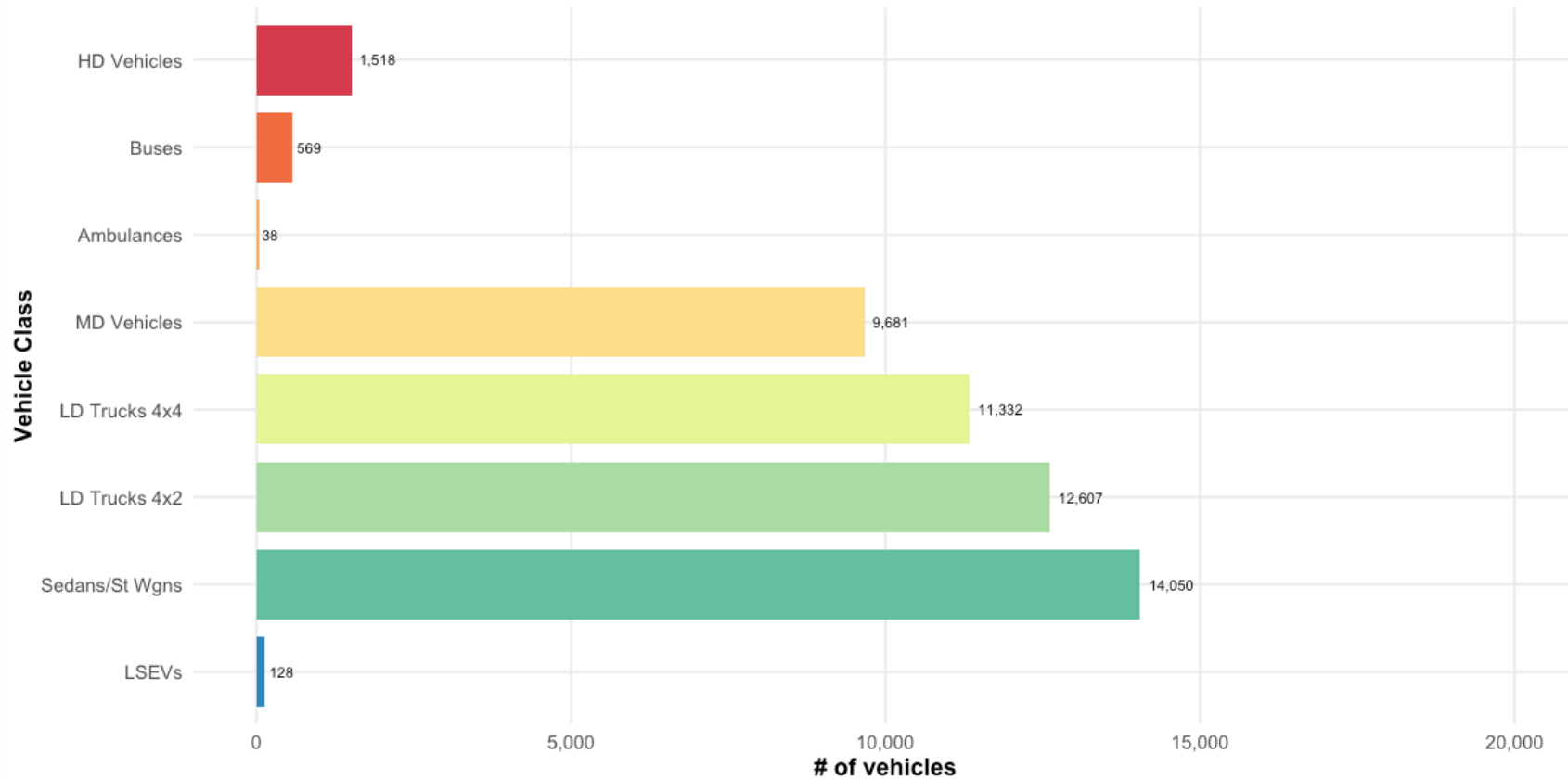
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# FY 2018 Fleet Data Overview

## Federal Vehicle Disposals

FY 2018 Disposals by Vehicle Class

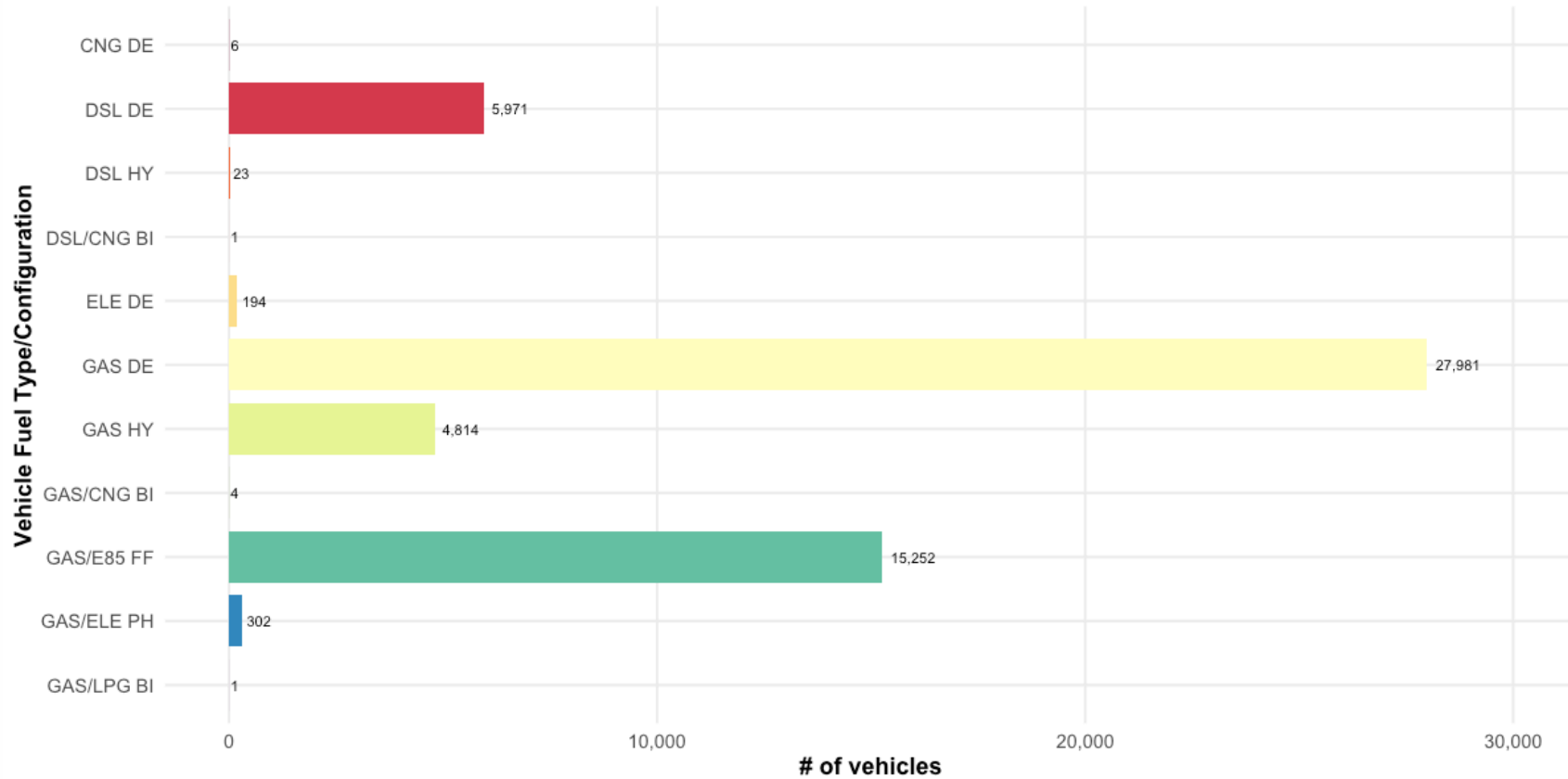


Source: FAST, final data as of 2019-03-21

# FY 2018 Fleet Data Overview

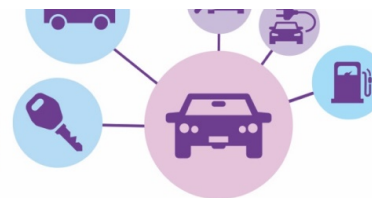
## Federal Vehicle Acquisitions

FY 2018 Acquisitions by Vehicle Fuel Type/Configuration



Source: FAST, final data as of 2019-03-21

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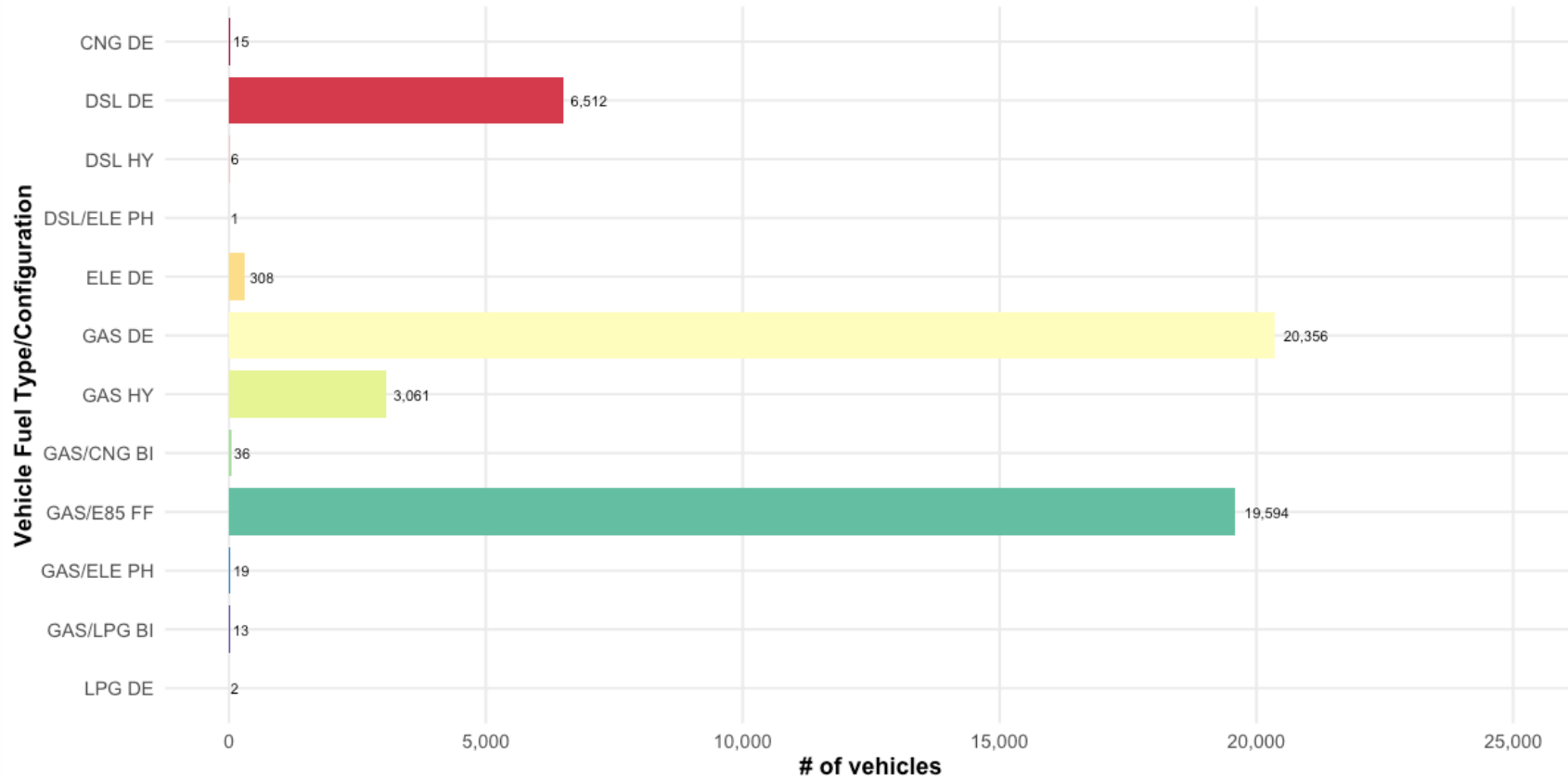




# FY 2018 Fleet Data Overview

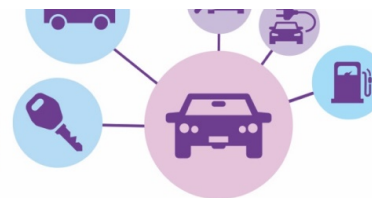
## Federal Vehicle Disposals

FY 2018 Disposals by Vehicle Fuel Type/Configuration

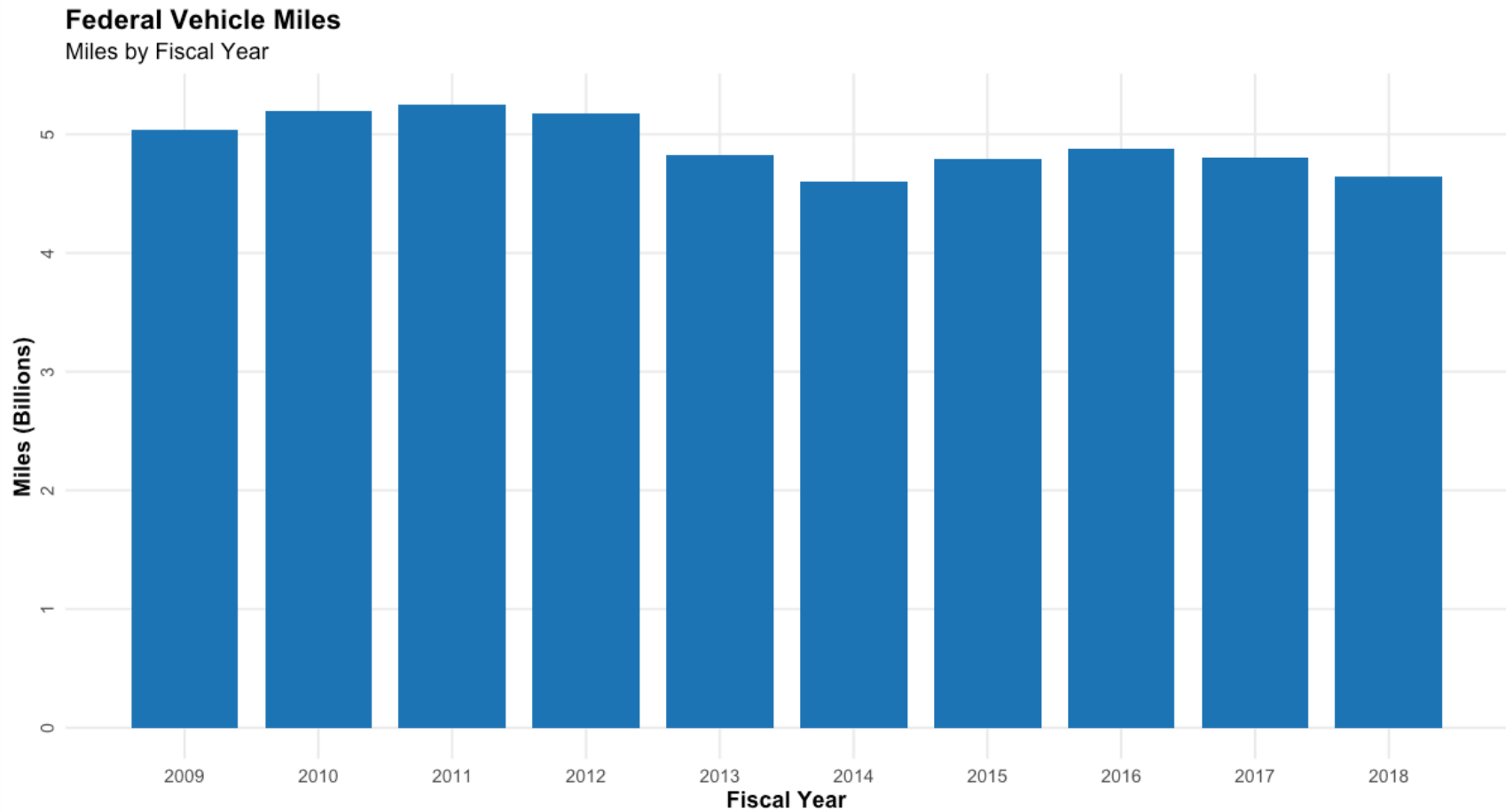


Source: FAST, final data as of 2019-03-21

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# FY 2018 Fleet Data Overview

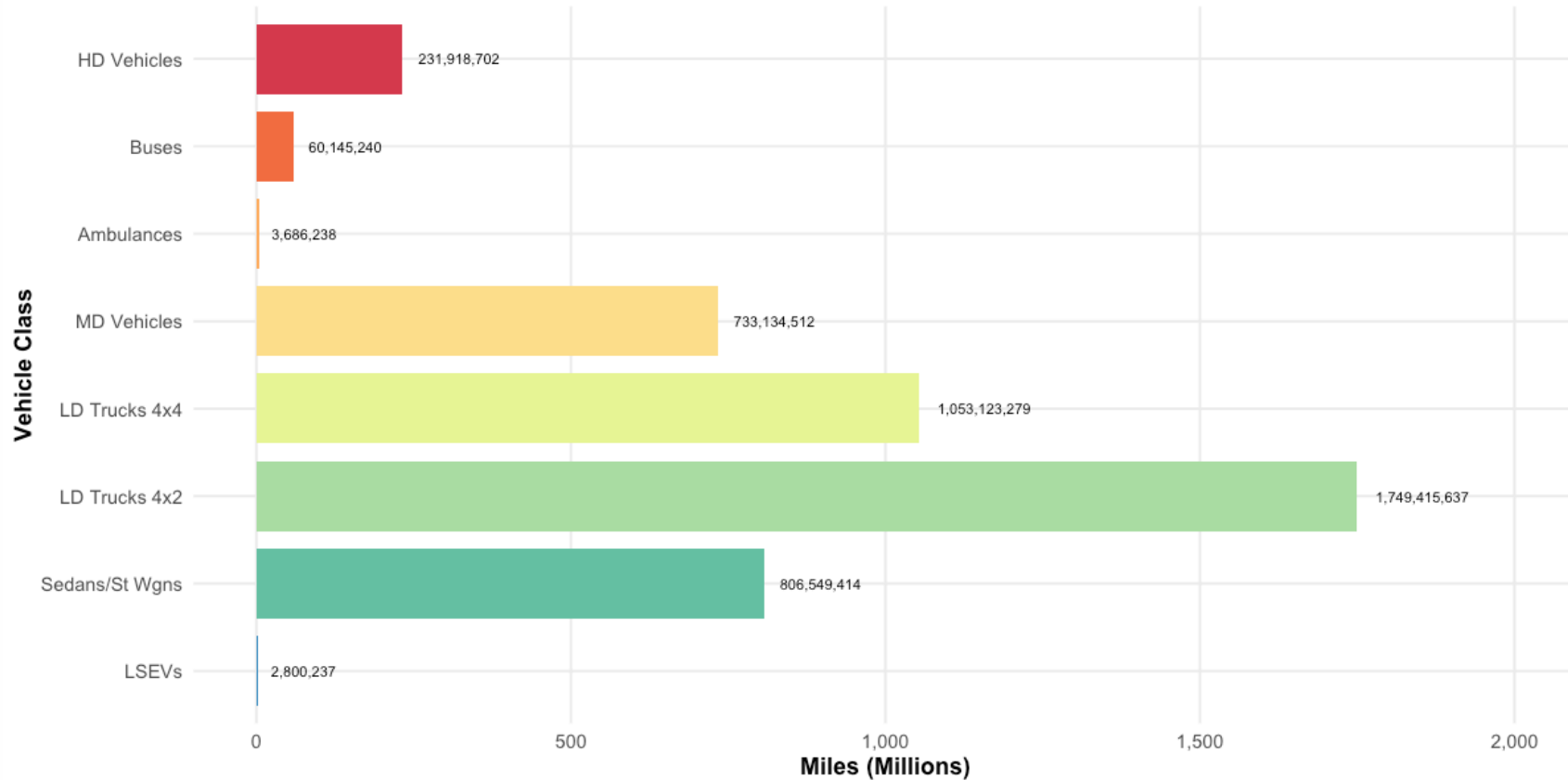


Source: FAST, final data as of 2019-03-21



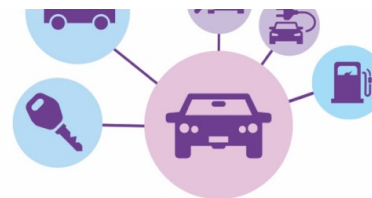
# FY 2018 Fleet Data Overview

**Federal Vehicle Miles**  
FY 2018 Miles by Vehicle Class



Source: FAST, final data as of 2019-03-21

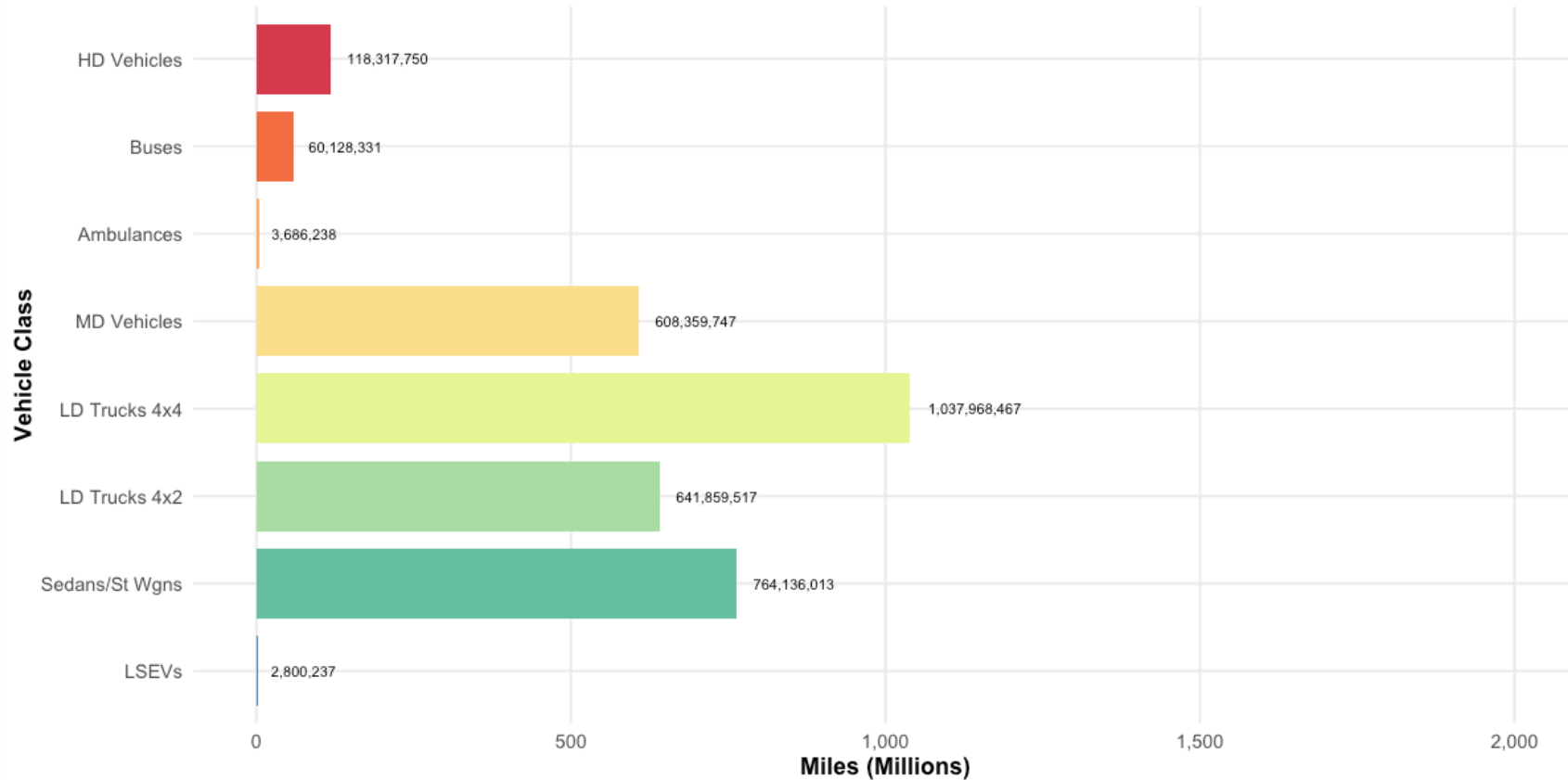
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# FY 2018 Fleet Data Overview

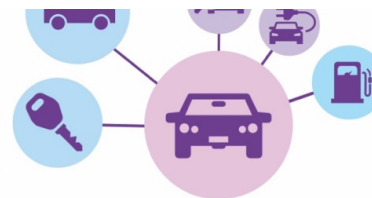
## Federal Vehicle Miles (excluding USPS)

FY 2018 Miles by Vehicle Class



Source: FAST, final data as of 2019-03-21

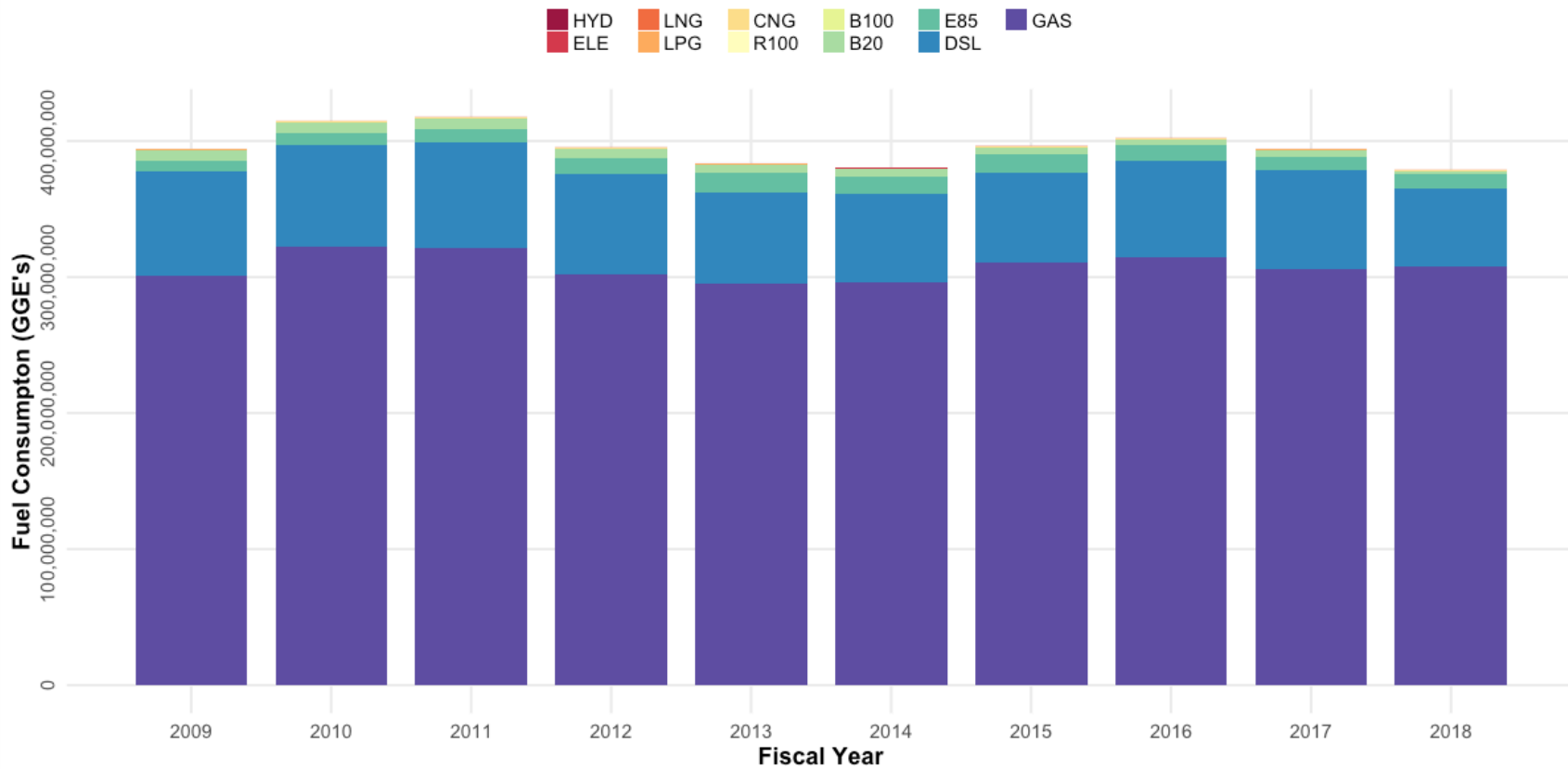
# FedFleet 2019



# FY 2018 Fleet Data Overview

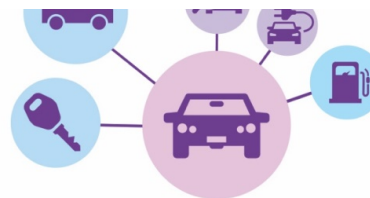
## Federal Vehicle Fuel Consumption

Fuel Consumption by Fiscal Year and Fuel Type



Source: FAST, final data as of 2019-03-21

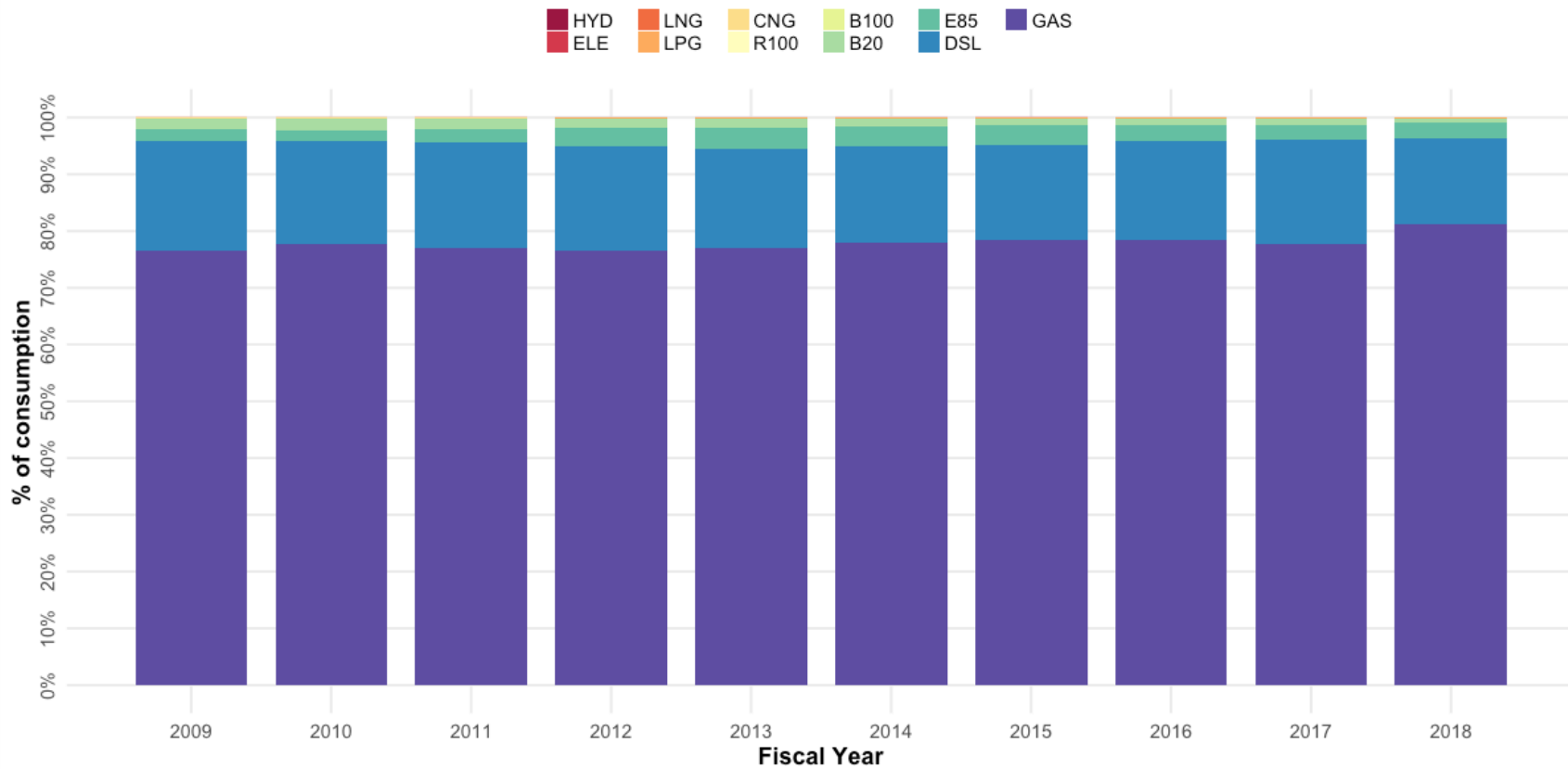
# FedFleet 2019



# FY 2018 Fleet Data Overview

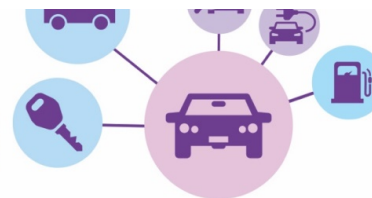
## Federal Vehicle Fuel Consumption

% Fuel Consumption by Fiscal Year and Fuel Type



Source: FAST, final data as of 2019-03-21

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# DATA QUALITY



# Data Quality

- Lots of interest in vehicle-level data
- How good is it?
  - *“It’s complicated...”*





# New Review Process

- FAST team reviewed agency submissions
- Written feedback to agencies
- Responses collected from agencies
- Short window for data improvement
- Summarized in dashboard

Review Areas / Items									
<b>1. Inventory Consistency / Completeness</b>									
a) Overall Fleet									
b) Foreign Vehicles									
c) Domestic Vehicles									
d) LE Vehicles									
e) ER Vehicles									
f) Armored Vehicles									
<b>2. Disposal Consistency / Completeness</b>									
<b>3. Mileage Consistency</b>									
a) Overall Fleet									
b) Foreign Vehicles									
c) Domestic Vehicles									
d) LE Vehicles									
e) ER Vehicles									
f) Armored Vehicles									
<b>4. Fuel Consumption Consistency</b>									
a) Overall Fleet									
b) Foreign Vehicles									
c) Domestic Vehicles									
d) LE Vehicles									
e) ER Vehicles									
f) Armored Vehicles									
g) Petroleum as % of Total									
h) Petroleum Fuels									
i) Alternative Fuels									
<b>5. Cost Consistency</b>									
<b>6. Fuel Efficiency Validity</b>									
<b>7. Year-to-Year Reporting Consistency</b>									
a) Acquisition Dates: Current Year									
b) Acquisition Dates: Prior Year									
c) Disposal Dates: Prior Year									
d) Disposal Dates: Missing from Current Year?									
e) Change to Static Attribute (BPA 3.5)									
<b>8. Use of "Placeholder" Values</b>									

# 3 Questions

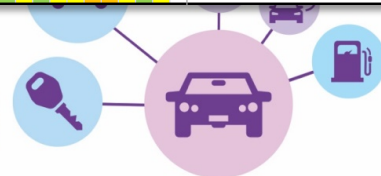
- What are the problems?
- How do we find them?
- What do we do about them?



# Problem Areas

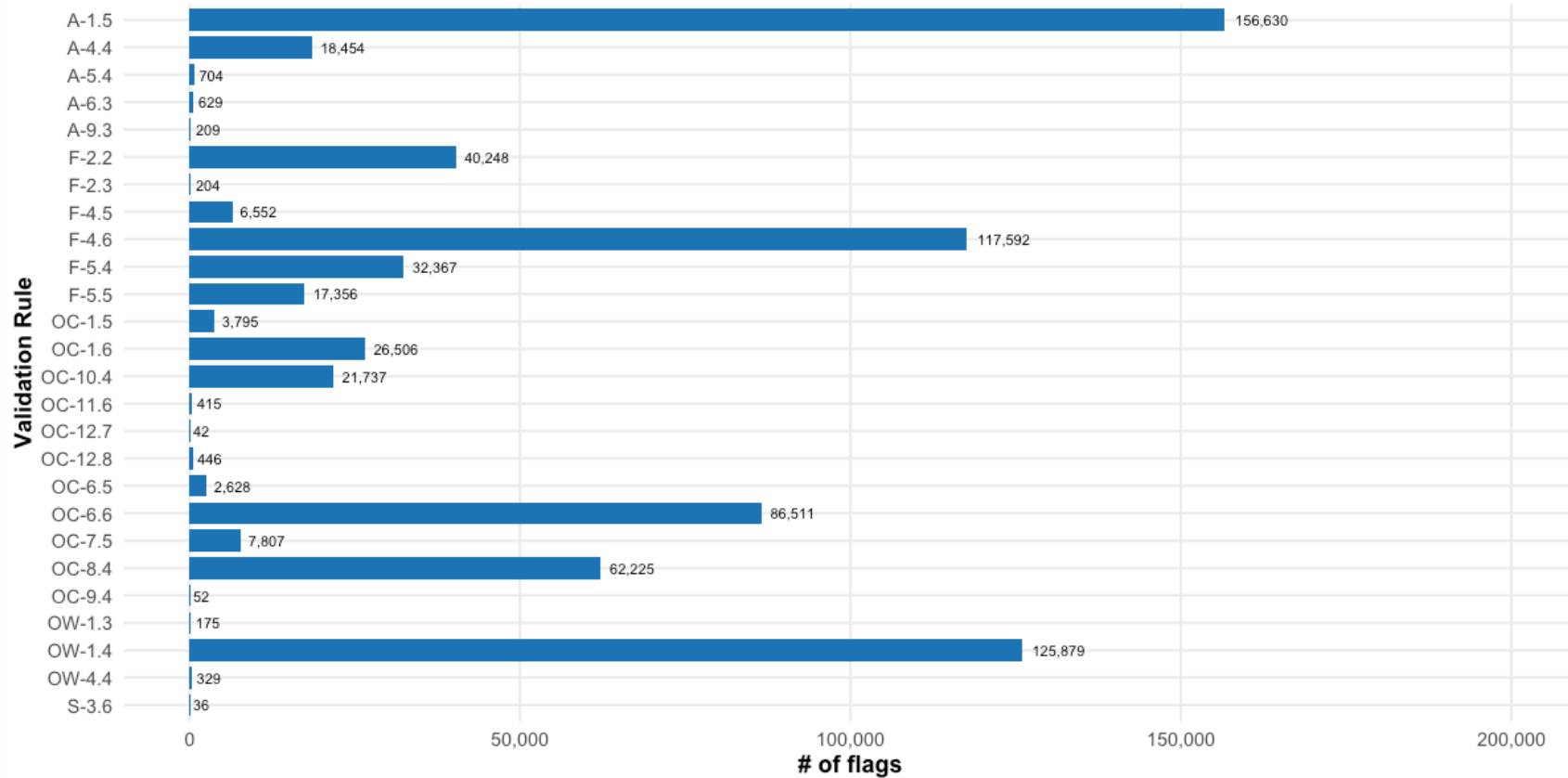


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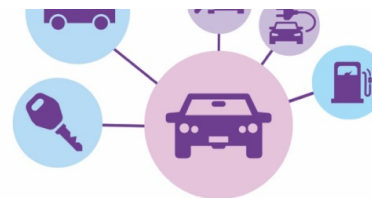
# Problem Areas

**VLD Validation Flags**  
FY 2018 Agency Submissions



Source: FAST, final data as of 2019-03-21

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# 1) Year-to-Year Consistency

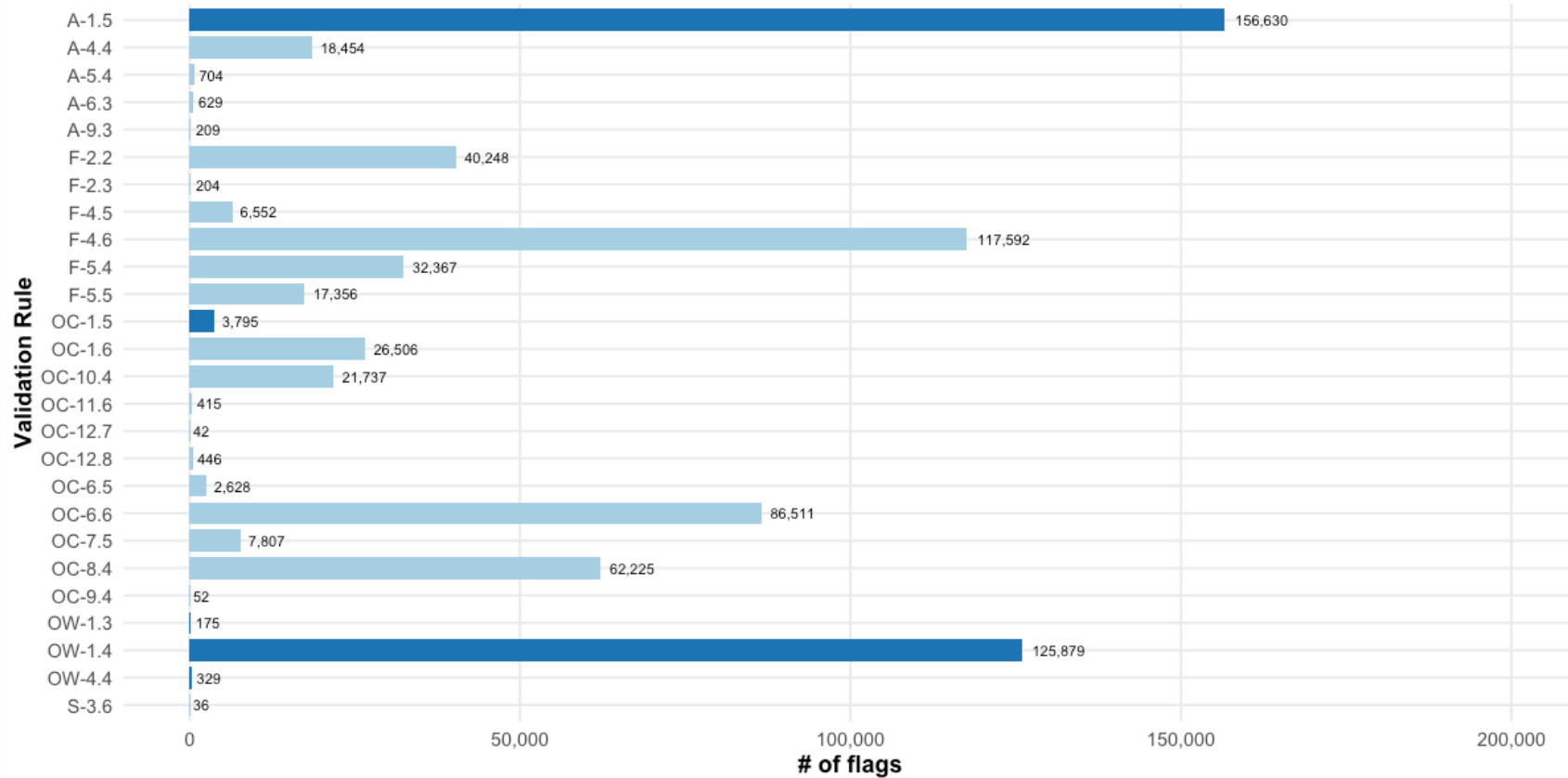
- Inconsistent vehicle ID's from prior year
- Missing vehicles?
  - Reported prior year, missing this year
  - Missing in prior year, reported this year
- Unexpected changes to vehicles reported in both years



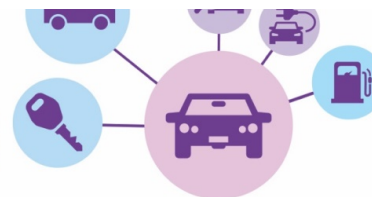
## 1) Year-to-Year Consistency

## VLD Validation Flags

### FY 2018 Submissions: Year-to-Year Consistency Flags



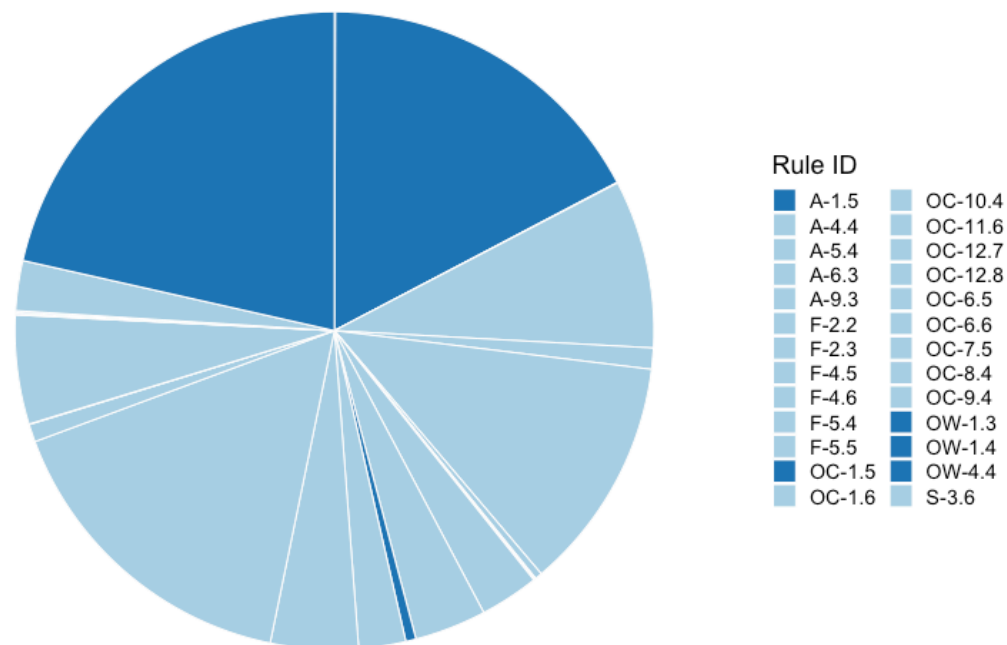
Source: FAST, final data as of 2019-03-21



# 1) Year-to-Year Consistency

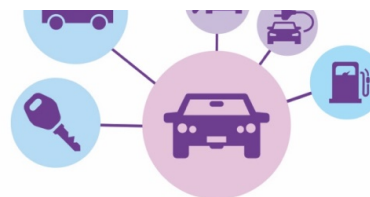
## VLD Validation Flags

FY 2018 Submissions: Year-to-Year Consistency Flags



Source: FAST, final data as of 2019-03-21

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# 1) Year-to-Year Consistency

- Why should we care?
  - We can't tell how (in)complete the dataset is
  - Some validation checks can't be run
  - Missing vehicles = missing costs, fuel, miles
  - Impacts on compliance determination





## 2) Fuel Consumption Data

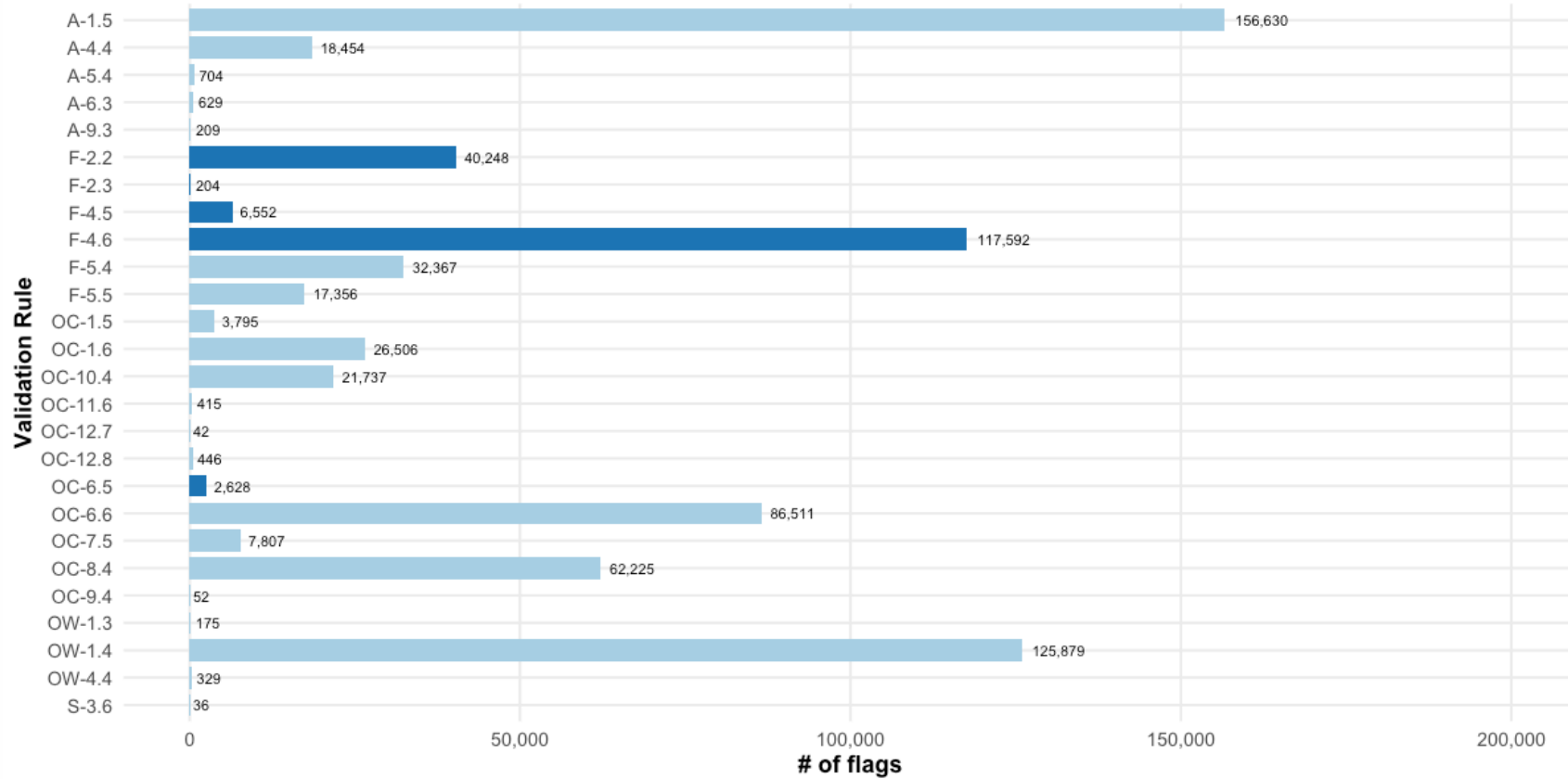
- Inconsistent fuel type reported for vehicle
- Invalid fuel volume
  - Frequent use of “placeholder” for fuel volume
  - Invalid (high) fuel efficiency
  - Under-reporting of consumption
    - ... and possibly fuel cost



## 2) Fuel Consumption Data

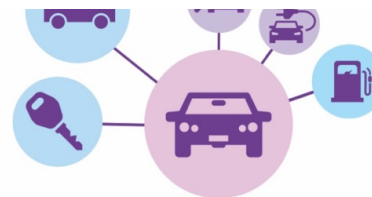
### VLD Validation Flags

FY 2018 Submissions: Fuel Consumption Flags



Source: FAST, final data as of 2019-03-21

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## 2) Fuel Consumption Data

- Why should we care?
  - Fuel consumption (type and volume) is of interest to lots of stakeholders
  - Fuel efficiency is questionable for many agencies
  - Impacts on compliance determination, performance evaluation



# How do we investigate?

- Flagging detail generated during reporting
- FAST query tool: “VLD Validation Flags”
- FAST’s “Vehicle Flagging Rules Summary”
- Post-data call review summary
- FAST technical team



# FAST VLD Flagging Rules Summary

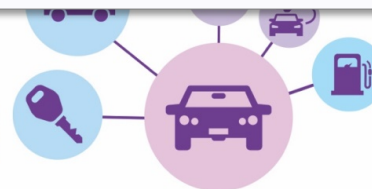
## Vehicle Flagging Rules Summary:

Organization Overall Score: 96%

Vehicle Class & Quantity		Business Rule Section					Total
		Vehicle Attributes	Ownership Characteristics	Special Characteristics	Operational & Cost Data	Fuel Data	
LSEVs	1	80%	100%	100%	91%	83%	88%
Sedans/St Wgns	966	98%	82%	100%	98%	96%	96%
Ambulances	45	97%	82%	100%	95%	96%	94%
Buses	190	96%	92%	100%	93%	90%	93%
LD 4x2	3669	97%	79%	100%	98%	98%	96%
LD 4x4	3639	98%	84%	100%	98%	96%	96%
MD	4421	98%	81%	100%	99%	98%	96%
HD	2589	96%	82%	100%	95%	93%	93%
<b>Total</b>	<b>15520</b>	<b>97%</b>	<b>82%</b>	<b>100%</b>	<b>98%</b>	<b>96%</b>	<b>96%</b>

Vehicle Type & Quantity		Business Rule		
		OW-1.3	OW-1.4	OW-4.4
LD SUV 4x2	402	100%	37%	100%
LD Minivan 4x2 (Passenger)	1353	100%	38%	100%
LD Minivan 4x2 (Cargo)	106	97%	72%	96%
LD Van 4x2 (Passenger)	28	100%	39%	100%
LD Van 4x2 (Cargo)	48	100%	44%	100%
LD Pickup 4x2	1732	100%	33%	99%
LD Other 4x2	0	--	--	--

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**LOOKING FORWARD...**

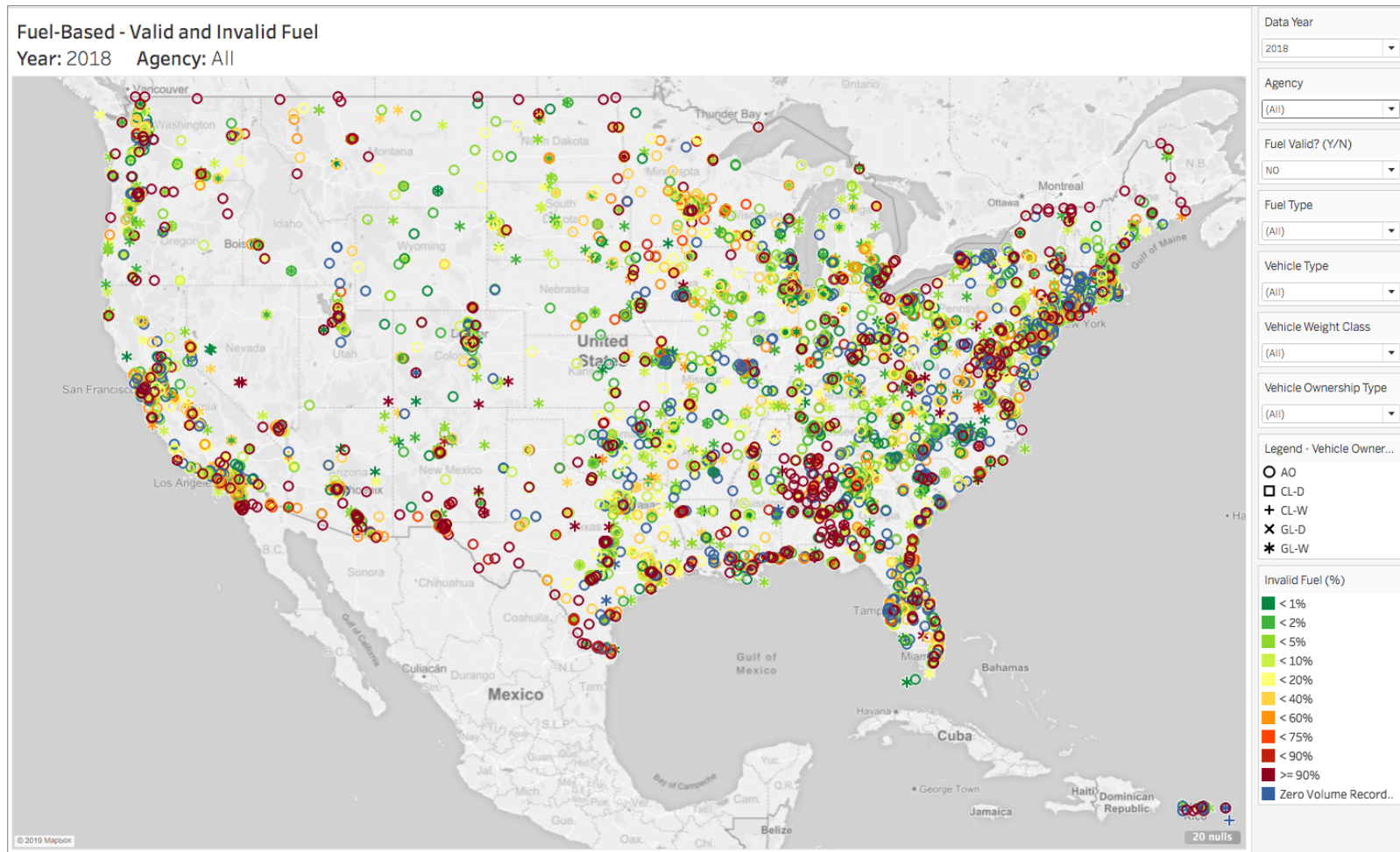


# New Review Process

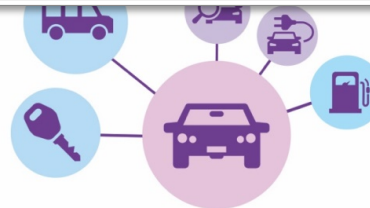
- FY 2018 “baseline” to evaluate changes in quality in future years
- Responses from agencies on how they plan to address problem areas



# New Ways to Look at Fleet Data

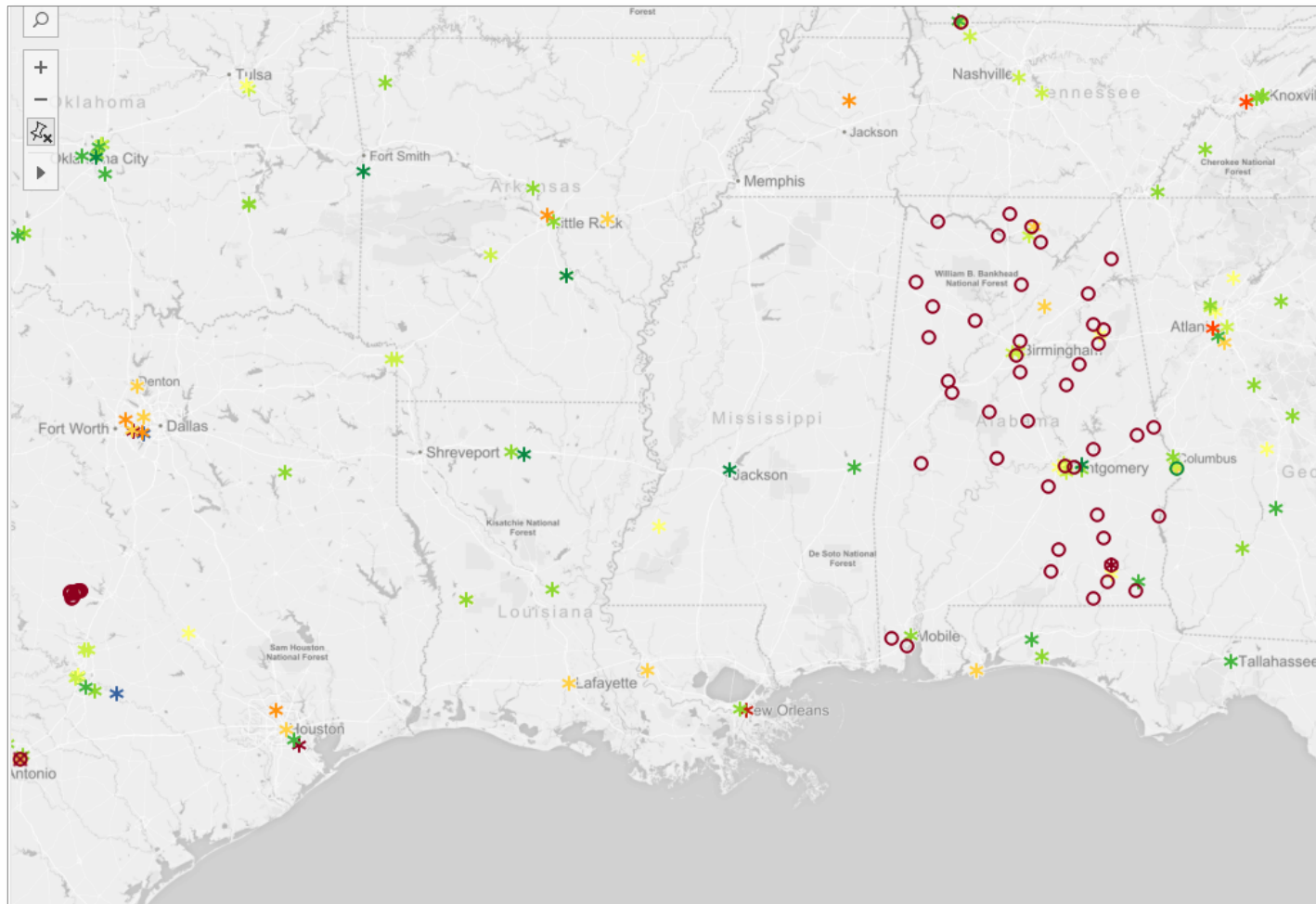


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# New Ways to Look at Fleet Data

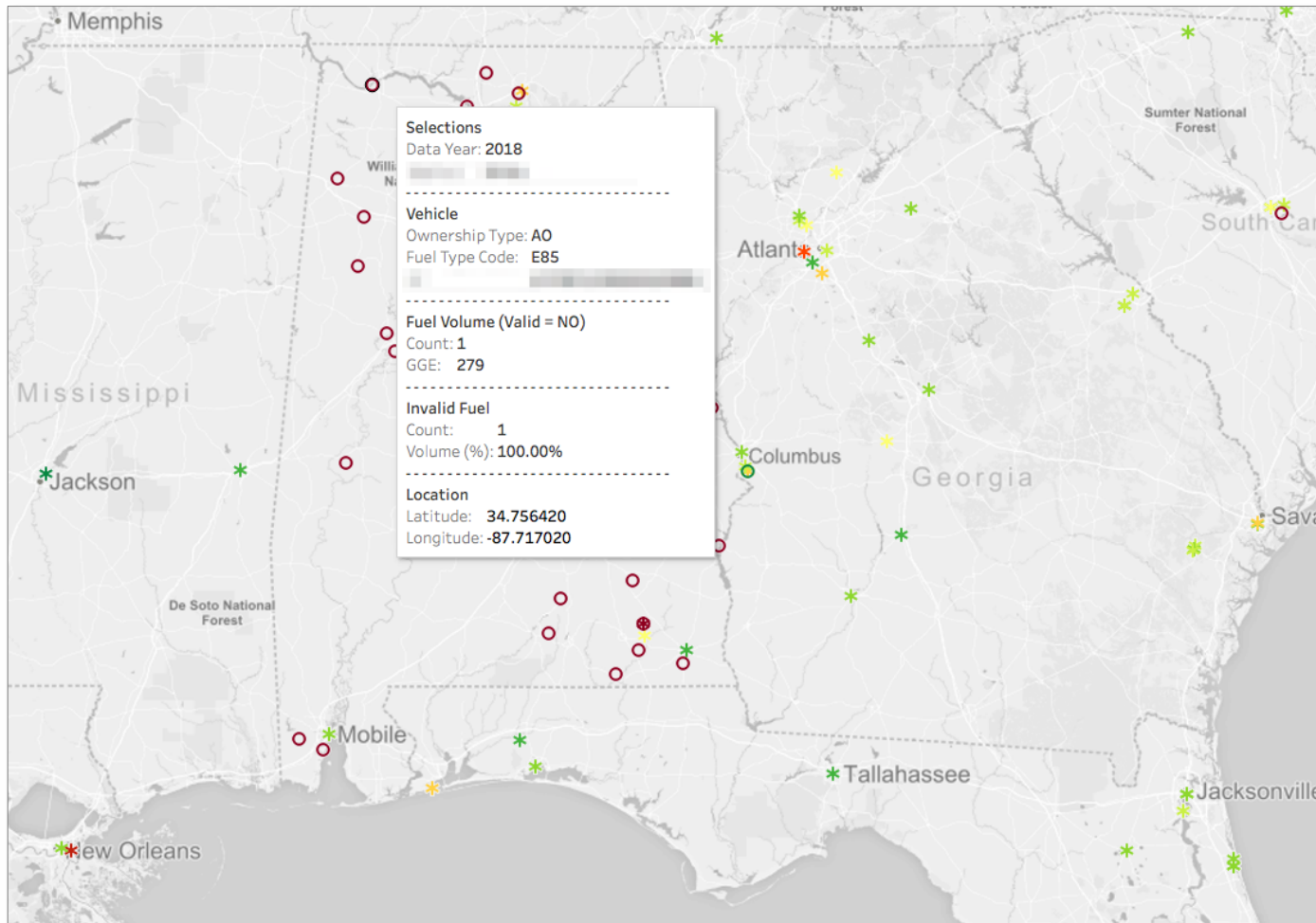


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A set of icons representing various fleet management concepts, including a car, a key, a car with a checkmark, a car with a dollar sign, and a gas pump, all connected by lines to a central car icon.

# New Ways to Look at Fleet Data



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## DISCUSSION



# FAST Program Contacts

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